RTO West
Transmission Planning Work Group
Recommendations to Regional Representative Group
Briefing Paper
August 2, 2000

Principles

A. Current planning functions will continue to be performed in the post-regional transmission organization ("RTO") world (leaving open the question of who is responsible for making sure this happens and who performs the functions).

B. Load-Serving Entities ("LSE") are responsible for providing or buying resources (including generation and transmission services) to serve firm loads.

   (1) Risk of non-supply is an issue between an LSE and its customers, and does not involve the RTO.

   (2) The RTO Grid (defined below) must be secure, and the RTO is responsible for maintaining its security (including lowering use of paths and curtailing load as necessary).

C. Parties that pay for facilities should have a voice in decision-making regarding such facilities.

Order 2000 Parameters

A. RTOs have ultimate responsibility for both transmission planning and expansion within their region.

   (1) A single entity must coordinate transmission planning and expansion activities.

   (2) RTOs have considerable flexibility regarding specific design questions, including who decides which projects should be built and how the costs and the benefits of the project should be allocated.

      (a) FERC has a strong preference for market-motivated operating and investment actions.

      (b) The RTO should rely upon market signals and market solutions in assessing all feasible options (e.g., construction of new generation, redispatch, and expansion).

      (c) That said, FERC has not mandated a market approach to the exclusion of an executive decision by an RTO.

B. RTOs are required to provide service under a tariff consistent with or superior to FERC's pro forma tariff

   (1) FERC's pro forma tariff obligates a transmission provider to expand and modify its system to provide services requested under the tariff.

   (3) The RTO can direct or arrange for the construction of expansion projects that are needed to ensure reliable transmission service.

C. An RTO's planning and expansion process must be designed to be consistent with state and local responsibilities.

Definitions

Planning: The information gathering, evaluation, and dissemination roles and responsibilities now performed by the PTOs. Planning includes (i) determining the capability of the RTO Grid and the location of bottle-necks, (ii) assessing the reliability of the RTO Grid, (iii) providing the information developed in (i) and (ii) to the market, (iv) identifying and evaluating alternatives upon the receipt of a request from the market (through a public process that takes into account non-transmission solutions and the impacts of RTO Grid activities on non-RTO Facilities), and (v) coordinating expansion activities in a manner that is consistent with state and local governmental and regulatory siting authorities.

Decision-Maker: Who decides whether planning recommendations are implemented.

Market-Driven Expansion Mechanism: Providing appropriate price signals and having the market be the decision-maker, not the RTO. Under this approach, a market sponsor comes to the RTO, requests service or specific action, is apprised of the range of alternatives and their relative costs and merit, make a decision regarding what action to take, and is responsible for the costs of implementing its decision.

> *Pure Market-Driven Expansion Mechanism*: In a "pure" Market-Driven Expansion Mechanism, if a market sponsor fails to come forward, the RTO does not have the authority to intervene and decide what action should be taken (for example, causing expansion to occur).[1]
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> *Modified Market-Driven Expansion Mechanism*: In a "modified" Market-Driven Expansion Mechanism, the RTO has backstop authority. If a market sponsor fails to come forward, the RTO has the discretion to intervene and decide whether and what action should be taken.

Market Failure: A Market Failure occurs when the market does not receive the right price signals and other information from the RTO because of a design flaw (either in the market itself or in the RTO structure). The fact that a market sponsor does not come forward to request an addition or replacement does not mean there has been a Market Failure.

RTO Facilities: Facilities that are within the RTO's sphere of influence.

> *RTO Grid*: Facilities that the RTO controls and offers service over, and lines (parallel and series) that impact the transfer capability of such facilities.
>
> *Local Facilities*: Facilities that the RTO does not control or offer service over, but that are included in the RTO tariff.

Non-RTO Facilities: Facilities that are outside of the RTO's sphere of influence. Non-RTO Facilities are all facilities that are owned by non-PTOs and those facilities owned by PTOs that are not transferred to the control of the RTO or included in the RTO tariff for rate-recovery purposes.

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[1] The RTO can evaluate the market to determine whether the lack of sponsors results from a Market Failure. If the RTO can pinpoint the source of the failure, the RTO can address or fix the market design issue. If the RTO cannot identify a market failure and is seriously concerned about the lack of expansion, the RTO can go to FERC to get guidance.

Policy Issues

In developing its recommendations, the Planning Work Group has addressed the following policy issues.[2]

A. Should facilities transferred to the RTO be limited to those facilities that the RTO will control and offer services over and the lines that impact the transfer capability of such facilities (fulfilling the intent of Order 2000) or, for purposes of pricing reform and convenience, should a PTO be allowed or required to submit non-essential facilities for inclusion in the RTO Tariff? From a planning perspective, is there any reason to include facilities in the RTO tariff that are not controlled by the RTO or that impact the transfer capability of such facilities?

B. What are the planning obligations of the RTO?

C. What is the decision-making authority of the RTO with respect to replacements, O&M, and additions to maintain transfer capability (maintaining existing firm transmission rights ["FTR"]) or additions to increase transfer capability (creating new FTRs).

   (1) None (Market-Driven Expansion Mechanism)?
   (2) As needed to maintain initial transfer capability?
   (3) To anticipate, plan for, and develop the system to meet future needs?

D. If the RTO does not have decision-making authority, can the RTO do anything other than reduce the use of the system within ratings, derate paths, or curtail loads as necessary to maintain a secure system? In other words, should the RTO have any backstop authority and, if so, for what purposes (e.g., "keeping the lights on" versus congestion relief)?

E. Should the owner of a new facility that interconnects with RTO Facilities be required to mitigate the impacts of its interconnection on the operational transfer capability of that particular segment of the RTO Grid?

F. Should the RTO have the lead engineering responsibility for RTO Grid planning or should that be left to the PTOs (with coordination and oversight by the RTO planning staff)?

[2] Policy Issues C and D overlap with the work of the Market-Driven Expansion Mechanism Small Group (which is a joint effort of the Planning, Congestion Management, and Pricing Work Groups). The joint group's recommendations will be presented at the August 9 RRG meeting, and the RRG should not decide the related policy issues until it has had an opportunity to fully consider the joint group's recommendations and briefing materials.

Components of Recommendations[3]

1. RTO Facilities
2. RTO West's Planning Process
   A. Planning Responsibilities
   B. Possible Scenarios Regarding Cost Recovery and Implications for Planning Structure
      (1) RTO Grid
      (2) Local Facilities
3. Mitigating the Impacts of Interconnections on the RTO Grid
4. Division of Planning Functions Between RTO West and PTOs
5. Independent Transmission Company

Recommendations

1. RTO Facilities (Facilities to be "Transferred" to RTO West)

A. "RTO Grid" (Facilities that the RTO controls and offers service over)

(1) FERC 7-Factor Test: Everything that qualifies as transmission is included; everything that qualifies as distribution is excluded.

Pros: Although transmission owners' application of test might vary slightly, provides a relatively objective test to determine RTO facilities; all facilities that FERC intended to be controlled by an RTO would be transferred to RTO West

Cons: Could be overinclusive (application of the test might result in inclusion of lines that are not relevant to the service offered by the RTO (including distribution facilities))

(2) Open Access Paths: Facilities that the RTO will control and offer service over and facilities that impact their transfer capability (including parallel and series facilities).

Pros: All of the facilities that FERC intended to be controlled by an RTO would be transferred to RTO West

(3) IndeGO Proposal: The facilities that the RTO will control and offer service over, and facilities that impact their transfer capability, and other subtransmission facilities that would have been included in the IndeGO tariff for cost-recovery purposes.

Pros: Eliminates (or minimizes) vertically-pancaked rates; allows PTOs to get out of the transmission business

[3]Some of the components are being addressed by other work groups but, in order to make a complete set of recommendations, the Planning Work Group identified different alternatives for each component and selected the preferred alternative from a planning perspective. Recognizing that the RRG may chose a different alternative for each component due to reasons unrelated to planning, the work group also identified a planning approach for each different alternative so that the RRG will have a road map to the planning recommendations flowing from its eventual decisions.

Cons: Not necessary for the additional facilities to be included in order for the RTO to perform its roles/responsibilities; depending upon who pays for the cost of the facilities not controlled by IndeGO facilities, expands the planning roles/responsibilities of RTO West

Recommendation: *Open-Access Paths. From a planning perspective, RTO West only needs to be involved with those facilities that (i) it controls and offers service over or (ii) have the ability to affect the transfer capability of such facilities. There is not a planning reason to include non-Open-Access Paths in RTO West's tariff.*

If, however, the RRG selects an option that results in facilities that the RTO does not have control over being part of the RTO tariff, there will need to be an additional category of RTO Facilities – "Local Facilities."

B. "Local Facilities" are those non-essential PTO facilities that RTO West is interested in because of their inclusion in the RTO West tariff.

2. RTO West's Planning Process

A. Planning Responsibilities

(The RTO does not have an obligation to serve load, and, so long as the RTO maintains a secure system, the issue of non-supply is a matter between the LSEs and their customers.)

(1) RTO Grid.

Recommendation: *As required by Order 2000, RTO West will have "ultimate responsibility" for planning and expansion of the RTO Grid. The Planning Work Group recommends adoption of a planning approach that fulfills the functions identified in the planning definition. The Planning Work Group has prepared a detailed list of planning functions and, based upon the direction it receives from the RRG, will allocate responsibility for performing these planning functions to RTO West and the PTOs (see Recommendation 4, infra).*

(2) Local Facilities.

Recommendation: *The nature of RTO West's planning responsibility for Local Facilities will depend upon the decision-making and cost recovery framework agreed to by the RRG. See Cost Recovery Options for Local Facilities Matrix, infra.*

B. Possible Scenarios Regarding Cost Recovery and Implications for the Planning Structure

Matrices follow that detail the alternatives regarding cost-recovery for replacements and additions to the RTO Grid and Local Facilities and the implications of these choices on the RTO planning structure.[4] It should be noted that there are at least three different purposes underlying proposed replacements and additions – congestion relief, maintaining existing transfer capability, and "keeping

[4] The Planning Work Group is not responsible for determining who pays, whether for existing facilities (Pricing Work Group), for new facilities to relieve congestion (joint effort of Congestion Management Work Group, Pricing Work Group, and Planning Work Group), and new facilities for other purposes (Pricing Work Group, with possible input from joint effort regarding Market-Driven Expansion Mechanism). At its July 19 meeting, the RRG asked the Planning Work Group to create a menu of "who pays" with the recommended planning approach for each scenario. The following matrices contains this menu. In addition, the Planning Work Group has provided recommendations regarding what appears to be the preferred "who pays" scenarios from a planning perspective.

the lights on." The RRG could select different cost-recovery regimes for each of these different purposes. The matrices show the implications to the RTO West planning structure resulting from those choices.

Cost-Recovery Options
For RTO Grid

	Company Rates (PTOs' existing customers)	**Area Rates** (Customers within a geographic area)	**Postage Stamp Rates** (All RTO customers)	**Pure Market-Driven Mechanism** (Market Sponsor(s), including PTOs)	**Modified Market-Driven Mechanism** (If RTO Applies Backstop, it Determines Who Benefits and Assigns Costs)
Decision-Maker	RTO	RTO	RTO	Market Sponsor(s)	Market Sponsor(s), but RTO backstop
Does the RTO Allocate Benefits and Costs?	Yes	Yes	Yes	No	Only if RTO Exercises Backstop

Pros and Cons from Planning Perspective (Pros and Cons from other Work Group Perspectives, in Particular from the Joint Group dealing with Market-Driven Expansion Mechanism will be More Fully Evaluated in those Work Group's Recommenda-tions	Cons: Possible bias toward transmission solutions; Checkbook holder does not have decision-making authority; May require more active planning role by RTO/larger staff	Cons: Possible bias toward transmission solutions; Checkbook holder does not have decision-making authority; May require more active planning role by RTO/larger staff	Cons: Possible bias toward transmission solutions; Checkbook holder does not have decision-making authority; May require more active planning role by RTO/larger staff	Pros: For the most part, similar to pre-RTO arrange-ments with some exceptions (some PTOs have relationship that provide for different cost recovery of expansion; No need for RTO to allocate benefits and costs (which could present difficulties distinguishing between purposes for replacements/ additions) Cons: Some equity/political issues (including rural/urban and level of service issues)	Pros: Ensures that expansion occurs Cons: Under-mines the Market-Driven approach; If backstop exercised, possible bias toward transmission solutions; Checkbook holder does not have decision-making authority; May require more active planning role by RTO/larger staff

	Company Rates (PTOs' existing customers)	**Area Rates** (Customers within a geographic area)	**Postage Stamp Rates** (All RTO customers)	**Pure Market-Driven Mechanism** (Market Sponsor(s))	**Modified Market-Driven Mechanism** (If RTO Applies Backstop, it Determines Who Benefits and Assigns Costs)
Recommended Scope of Planning Process	Open planning process encompassing necessary functions including consideration of non-transmission solutions; Decision-making by RTO requires additional depth in RTO to decide when to take action and how to identify beneficiaries and allocate costs; RTO facilitates the construction of the new facilities (coordinating with PTOs, regulatory agencies, and other parties as necessary)	Open planning process encompassing necessary functions including consideration of non-transmission solutions; Decision-making by RTO requires additional depth in RTO to decide when to take action and how to identify beneficiaries and allocate costs; RTO facilitates the construction of the new facilities (coordinating with PTOs, regulatory agencies, and other parties as necessary)	Open planning process encompassing necessary functions including consideration of non-transmission solutions; Decision-making by RTO requires additional depth in RTO to decide when to take action and how to identify beneficiaries and allocate costs; RTO facilitates the construction of the new facilities (coordinating with PTOs, regulatory agencies, and other parties as necessary)	Open planning process encompassing necessary functions including consideration of non-transmission solutions; RTO facilitates the construction of the new facilities (coordinating with PTOs, regulatory agencies, and other parties as necessary)	Open planning process encompassing necessary functions including consideration of non-transmission solutions; Decision-making by RTO (backstop) requires additional depth in RTO to decide when to take action and how to identify beneficiaries and allocate costs; RTO facilitates the construction of the new facilities (coordinating with PTOs, regulatory agencies, and other parties as necessary)

(1) RTO Grid

Recommendation: *With respect to RTO Grid, all expansion decisions should be left to the market through a Pure Market-Driven Expansion Mechanism with the exception of replacements solely for catastrophic and unexpected loss of facilities. The costs of the excepted replacements should be recovered through company rates.*

The Planning Work Group believes that a Market-Driven Expansion Mechanism is appropriate given the fact that the RTO does not have an obligation to serve load, but is responsible for the security of the RTO Grid. Only facilities that have market support will be built, and everyone who pays for a replacement or an addition will receive a benefit. A Market-Driven Expansion Mechanism approach will not require as expansive of a process or as significant oversight from the RTO. That said, RTO West can maintain the security of the RTO Grid without replacements or additions.

The Planning Work Group recognizes that the RRG might decide that the RTO should "backstop" a Market-Driven Mechanism to maintain the RTO Grid's transfer capability at a level that is sufficient to (i) satisfy "Day One" FTRs and/or (ii) "keep the lights on." The RRG will receive more specific recommendations regarding this issue from the Joint Planning, Pricing, and Congestion Management Work Group, which will include a full discussion of the backstop issue (pros and cons).

The Planning Work Group also recognizes that the RRG might decide to have the RTO automatically construct replacements (at least with respect to Day One transfer capability) and, if this happens, irrespective of who pays, the Planning Work Group would recommend that alternatives for the replacements be considered in a process that compares the cost-effectiveness of non-transmission solutions, including buying back FTRs.

(2) Local Facilities

If facilities are put into the RTO West tariff that are not controlled by the RTO and if there is a possibility that the costs of those facilities will be spread over a larger pool of RTO customers, it will be necessary to develop a planning process that allows for those that share in the costs of such facilities to have a voice in the decision-making.

Cost-Recovery Options
for Local Facilities

	Company Rates (PTOs' existing customers)	**Area Rates** (Customers within a geographic area)	**Postage Stamp Rates** (All RTO customers)	**Pure Market-Driven Mechanism** (Market Sponsor(s))	**Modified Market-Driven Mechanism** (If RTO Applies Backstop, it Determines Who Benefits and Assigns Costs)
Decision-Maker	PTOs (with limited involvement by RTO) after open process that takes into account non-transmission solutions	Area transmission customers (with limited involvement by RTO) after open process that takes into account non-transmission solutions; RTO ADR if necessary	RTO	Market Sponsor(s)	Market Sponsor(s), but with RTO Backstop
Does the RTO Allocate Benefits and Costs?	No	Only if the affected area(s) couldn't agree and RTO is Decision-Maker	Yes	No	Only if RTO Exercises Backstop

	Company Rates (PTOs' existing customers)	**Area Rates** (Customers within a geographic area)	**Postage Stamp Rates** (All RTO customers)	**Pure Market-Driven Mechanism** (Market Sponsor(s))	**Modified Market-Driven Mechanism** (If RTO Applies Backstop, it Determines Who Benefits and Assigns Costs)
Pros and Cons from a Planning Perspective	Pros: Straightforward; costs reside with Decision-Maker		Cons: Not likely to occur, issues with level of service/treatment of similarly situated customers	Pros: Straightforward; costs reside with Decision-Maker	
Scope of Planning Process	Limited involvement by RTO in Local Facilities planning -- double-check to make sure that no negative impact on transfer capability of RTO Grid	RTO would need to establish area planning process to ensure that all parties that will pay for new facilities have a voice in the decision-making; if area can decide what facilities are needed, RTO would double-check to make sure no negative impact on transfer capability of RTO Grid, if area cannot decide RTO would provide for dispute resolution, including arbitration based upon area standards	Centralized process with necessary public input and consideration of non-transmission alternatives	Limited involvement by RTO in Local Facilities planning -- double-check to make sure that no negative impact on transfer capability of RTO Grid	RTO would have to have capacity to have centralized process with necessary public input and consideration of non-transmission alternatives should it need to exercise its backstop authority

Recommendation**:** *PTOs (after an open process that takes into account non-transmission solutions) should decide whether replacements or additions should be made to Local Facilities and recover the cost of such replacements or additions through company rates. The RTO should only be involved in local planning to ensure that replacements and additions do not negatively impact the transfer capability of the RTO Grid and to coordinate seams issues and joint projects. There is no need for a RTO backstop to ensure the reliability of Local Facilities as that will be taken care of elsewhere (mandatory standards – pass through responsibility for fines).*

3. Mitigating the Impact of Interconnections on the RTO Grid

Recommendation: *RTO West should require the owner of a new facility that is interconnecting with the RTO Grid to mitigate the impacts of its interconnection on the operational transfer capability of that particular segment of the RTO Grid. While the Planning Work Group is strongly behind this recommendation, they note that applying it in real-time could be difficult.*

4. Division of Planning Functions Between RTO West and PTOs

A. Planning Work Group Recommendations.

The majority of the work group believes that if the RRG were to adopt all of the Planning Work Group's recommendations, the number of overall planning staff currently employed by the PTOs would be sufficient to do the work envisioned for the RTO as well as the work that remains for the PTOs.[5]

(1) RTO Performs. If the RRG chooses to have the RTO West planning staff perform the majority of the planning functions, the overall planning staff would be allocated 60% to RTO West planning staff, and 40% to PTOs' planning staff.

Pros: Market Participants might be more comfortable than if PTOs continue to perform planning functions, planning process might be more efficient and develop better alternatives given the wider geographic scope.

Cons: The PTOs have first-hand knowledge of their transmission systems that will be time-consuming and costly for the RTO staff to acquire.

(2) RTO Coordinates. If the RRG chooses to have the RTO West planning staff coordinate and oversee the implementation of planning functions by the PTOs, the overall planning staff would be allocated 20% to RTO West planning staff and 80% to the PTOs' planning staff.

Pros: When projects are being built, the lead planning engineer need to coordinate with the PTO engineers constructing the project and it would be more efficient if this coordination occurred from the beginning of the planning process.

Cons: Perception of bias, less independence from merchant interests (might not pass muster with FERC), might require extra staff and time to coordinate between the RTO and individual PTOs

B. Possible Outcome.

If the RRG adopts a facilities inclusion approach that allows the PTOs to include non-RTO Grid facilities in the RTO West tariff and further provides that in the future the costs of any new facilities can be spread over an expanded pool of RTO West customers, the majority of the Planning Work Group believe that the number of planning staff currently employed by the PTOs would need to be increased. This results from the extra layer of process that will be needed with respect to Local

[5] The number of PTO long-term planning staff will need to be increased in the next few years given the anticipated changes in requirements regarding compliance and reporting irrespective of the form of RTO West.

Facilities to ensure that those who pay for those facilities in the future have a voice in the decision making regarding those facilities.[6]

(3) RTO Performs. If the RRG chooses to have the RTO West planning staff perform the majority of the planning functions, the overall planning staff would be allocated 60% to RTO West planning staff, and 40% to the PTOs' planning staff.

(4) RTO Coordinates. If the RRG chooses to have the RTO West planning staff coordinate/oversee the implementation of planning functions by the PTOs, the overall planning staff would be allocated 30% to RTO West planning staff and 70% to the PTOs' planning staff.

Recommendation: *Currently, the work group does not have a recommendation regarding the choice between RTO Performs and RTO Coordinates. The relevant policy choice is whether to staff up the RTO so that it can assume a lead engineering role or whether the PTOs should be left with that responsibility. The pros and cons of either approach are set out above, and there is not agreement on which approach would be the most efficient. That said, of the two options identified, four work group members favor RTO Performs (BPA, Montana Power, BC Hydro, and PNGC) and two favor RTO Coordinates (Avista, Idaho Power). Several of the other work group members did not state a preference.*

5. Independent Transmission Company

The Independent Transmission Company ("ITC") has not yet made a specific proposal regarding how they might be different from the other transmission owners with regard to planning matters, at least on Day One. As such, the work group does not have a recommendation regarding the ITC.

It has come to the attention of the group that a policy question is being raised that could result in the ITC requesting special treatment with respect to planning functions in the future. The work group believes that there would be technical implications if this occurred; however, as consideration of the potentially different treatment of the ITC is not yet ripe, the Planning Work Group will not discuss the possible implications until it is requested to do so by the RRG.

[6] This increase in staffing numbers is separate from the issue of increasing the overall long-term planning staff in the next few years given the anticipated changes in requirements regarding compliance and reporting. In addition, some work group members believe that the Filing Utilities' planning departments are currently understaffed and will need to increased in any event.